

TOWN OF NARRAGANSETT, RHODE ISLAND WATER SUPPLY SYSTEM MANAGEMENT PLAN

EXECUTIVE SUMMARY

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Prepared for:

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Executive Summary

This Water Supply System Management Plan (WSSMP) has been prepared as required under Rhode Island General Laws 46-15.3, as amended and titled “The Water Supply System Management Planning Act” (Act). The legislative authority to effectuate the goals and policies of this Act has been conferred to the Rhode Island Water Resources Board (RIWRB). To this end, the RIWRB has promulgated the Rules and Regulations for Water Supply System Management Planning, October 1998, as amended to implement the provisions of the Act.

Under this legislation, the Town of Narragansett – Narragansett Water Division, as a water purveyor supplying over 50 million gallons of water per year is responsible for the preparation and adoption of a WSSMP. It is also required that the Town update this WSSMP every five years and supply information as stipulated in the Regulations.

This WSSMP has been prepared to provide the proper framework to promote the effective and efficient conservation, development, utilization and protection of the natural water resources of the State as utilized by the Town. Further, the overall goals shall be consistent with State Guide Plan Element 721 – *Water Supply Policies for Rhode Island* and the Town of Narragansett Comprehensive Plan. The purpose of this WSSMP is to outline the objectives of the Water Supply System Management Planning process for the Town of Narragansett Water Division, and to serve as a guide to employ the proper decision-making processes.

The WSSMP contains a detailed description of the water system and includes the policies and procedures related to the general operation and management of the water system. The Emergency Management section relates to the vulnerability assessment of the water system for use in emergency planning. It shall be incumbent upon the Town of Narragansett Water Division to implement the recommendations and procedures outlined in this WSSMP in order to comply with the overall requirements of the Act.

Background

The Town of Narragansett Water Division is responsible for day to day operation of the water system. Figures 2-1 through 2-3 in the body of the report provide an overall organizational chart

of the Town government as well as an expanded breakdown of the Town's Engineering Department and Water Division.

Water System Description

The Town of Narragansett owns and operates a water distribution system consisting of over 70 miles of water main, storage tanks, booster station, hydrants, meters and appurtenances that serve approximately 5,192 customer accounts in three (3) main areas of the Town.

Narragansett does not own or operate any independent surface or groundwater supply sources. The Town purchases all of the water it distributes on a wholesale basis from the following two (2) sources:

- Town of North Kingstown (Narragansett North End)
- United Water Company (formerly Wakefield Water Company) (Narragansett North End and South End)

The Narragansett water system is divided into three (3) subsystems consisting of the North End, South End and Jerusalem service areas. The Jerusalem service area, located adjacent to the South End of the system was interconnected by link to Galilee in 2001 by directional drilling and installation of an 8-inch line. Although both the North End and South End service areas remain completely separate, they are connected indirectly by means of the United Water Company distribution system, which has the ability to furnish water to both areas.

The Narragansett water distribution system utilizes three (3) storage facilities located throughout the service area and one (1) booster pump station located on Point Judith Road (Route 108) between South Pier Road and Westmoreland Street. This is also the location of an interconnection between the United Water Company system and the Town's distribution system. The primary function of this station is to boost the system's hydraulic head when the incoming supply pressure from the United Water Company system is determined to be insufficient to accommodate the required demand. The actual booster station operation is directly related to the water elevation in both the Kinney Avenue and Point Judith water storage tanks.

The system's water transmission mains are primarily involved in the conveyance of potable water between the points of water purchase, the water supply system service area, and the system storage tanks. These water mains are 16-inches and 12-inches in diameter. The exact age of all these water mains is unknown; many of the ages have been estimated from historical records however, the first water mains installed as part of this water system were placed in service circa 1938 and consisted of asbestos cement (AC).

Policy and Procedure

The Narragansett Water Division services 5,192 area water customer accounts consisting of 5,037 residential connections, 104 commercial connections, 10 industrial connections and 41 governmental connections. The Water Division provides water to 63% of its residents and businesses in Narragansett. Within the water service area there are eleven (11) private wells in use that could be switched to public service and added to the current volume served. Current average day customer demand is 0.758 mgd. Under projected water use for the 5-year planning period, it is expected that the average day demand will be equal to 0.771 mgd. For the 20-year planning period, it is expected that the demand will be 0.787 mgd. These projections are based primarily on population projections and do not account for significant water savings potentially realized through demand management techniques. They do, however, consider non-account water at the current rate of 14.66 percent.

It would appear that the Narragansett water system supplies are adequate to meet existing and future demands for the 5- and 20-year planning periods. The Narragansett water supply system does not operate any surface or groundwater sources of supply but, instead, purchases 100% of its water on a wholesale basis from neighboring water supply systems (i.e. United Water Company, Town of North Kingstown).

The Water Division employs an annual capital improvement program which addresses system improvement and replacement/rehabilitation projects. The most significant modifications and improvements since preparation of the previous WSSMP include the following.

- Install a new pressure transmitter at the North End water storage tank and calibrate the tank level.
- Install security cameras at the Point Judith water storage tank and a new fiber optic cable from the Point Judith water tank to the Kinney Avenue water tank for camera and remote gate access.
- Point Judith Road Booster Pump Station Upgrade: Install a new roof and siding on building structure.
- Kinney Avenue Water Storage Tank: Clean interior surfaces and inspect the tank.
- North End Water Storage Tank: Clean interior surfaces and inspect the tank. Rebuild existing 8" Ross valve and convert it from an altitude valve to a solenoid valve control.
- Point Judith Water Storage Tank: Paint exterior and interior surfaces and inspect the tank. Install a new cathodic protection system.
- Master Meter Replacement Program: Purchase and install 4 Mag master meters and install at all of the system entry points.

The Emergency Management section of this Plan (Volume II) establishes the responsibilities and authority within the Narragansett Water Division for responding to most probable emergencies and outlines specific tasks for carrying out functional and constructive solutions based on a review of the potential emergencies and risks. The procedures outlined are consistent with the goals of the State Emergency Water Supply System Management Plan. It is also intended that this document provide guidance to ensure that the primary aspects of recovery from an emergency are addressed in an organized manner to aid in an efficient response and in maintaining drinking water quality and quantity.